

### REMARKS

Applicants thank the Examiner for the thorough consideration given the present application.

Upon entry of the present amendment, claims 11 and 30-59 will be pending in this application. Claims 27-29 have been canceled herein. Claims 11, 32 and 58 have been amended. Claim 32 was amended to correct a typographical error. Support for the recitations of claims 11 and 58 can be found in claims 27-29 as well as the specification at, *inter alia*, page 20, line 15 to page 29, line 12. Therefore, no new matter has been added.

Applicants submit that the present Amendment is merely formal in nature, presents no new issues since claims 11 and 58 merely incorporate subject matter from previously examined dependent claims 27-29, is in accordance with the Examiner's instructions, reduces the number of issues under consideration, and places the case in condition for allowance. Entry of the present amendment is proper to place the claims in better form for appeal.

Applicants respectfully request the Examiner to reconsider and withdraw the rejections in view of the following remarks.

#### Issues under 35 U.S.C. §112, first paragraph

The Examiner has rejected claim 11 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement and the enablement requirement. Specifically, the Examiner asserts that the specification does not disclose the broad class of reactive derivatives in process (C). Also, the Examiner asserts that the expressions of an ester residue, a reactive derivative, and a leaving group do not meet the enablement requirement because the specification has no indication given as to what the esters, reactive derivatives, or leaving groups really are. Reconsideration and withdrawal of these rejections are respectfully requested based on the following considerations.

Regarding the allegedly unknown reactive derivatives of a compound of the formula [VIII], Applicants have replaced the term "reactive derivative" with the term "acid halide."

Support for the amendment can be found in claim 27 as well as throughout the present specification, for example, at page 29, lines 6-7. The preparation of an acid halide of the compound of the formula (VIII) is within the knowledge of one of ordinary skill in the art. Accordingly, one of ordinary skill in the art can easily produce these acid halides by, for instance, replacing the -OH group of RCOOH of the compound of the formula [VIII] with a halogen atom, which is a well known method to prepare acid halides.

Regarding expressions of ester residue, reactive derivative, and leaving group, Applicants have amended the claims to overcome the rejection. Specifically, the term "ester residue" has been replaced with the element "a lower alkyl residue selected from a group consisting of methyl residue and ethyl residue."

Finally, the term "leaving group" has been modified to be defined as "a halogen atom and sulfonic acid ester residues selected from the group consisting of an arylsulfonyloxy group, a lower-alkylsulfonyloxy group and a perhalogenolower-alkylsulfonyloxy group."

Applicants respectfully submit that the above amendments overcome the outstanding rejections. Therefore, reconsideration and withdrawal of these rejections are respectfully requested.

Issues under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 11 and 27-59 under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner asserts that the expressions of the leaving group, ester residue, and reactive derivative are not defined in claim 11, that the claimed process is not clearly disclosed by failing to recite the reaction conditions such as reagents, solvents, temperatures, etc., and that the terms of "converting" and "A'group" are indefinite. Reconsideration and withdrawal of these rejections are respectfully requested based on the following considerations.

Regarding the expressions of the leaving group, ester residue, and reactive derivative, Applicants respectfully submit that the amendments described above overcome this rejection. As such, Applicants respectfully request that the rejection be removed.

Regarding the reaction conditions, Applicants respectfully submit the following arguments. Applicants first note MPEP 2111, which states that "pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" In effect, Applicants are entitled to claim the present invention as broadly as possible within the limits of the specification.

The claimed invention comprises processes (A), (B) and (C) in sequence to give a compound of the formula [I] wherein process (A) has steps of 1)-a) or 1)-b), 2) and 3); process (B) has steps of 1), 2) and 3); and process (C) has one single step. Specifically, (A) 1)-a) is directed to reacting a compound of the formula [II] with a compound of the formula [III], and 1)-b) is directed to reacting a compound of the formula [IV] with a compound of the formula [V]. (A) 2) relates to the resulting compound of the formula [VI] to catalytic reduction, and (A) 3) relates to the resulting compound of the formula [VII] to lower-alkyl esterification when  $\text{COOR}^0$  is a carboxyl group, followed by isomerization to give a trans-form compound of the formula [VIII]. Also, (B) 1) pertains to a cyanation of a compound of the formula [IX], (B) 2) pertains to reacting the resulting compound of the formula [X] with a compound of the formula [XI] and reacting the resulting compound of the formula [XII] with a compound of the formula [XIII], and (B) 3) pertains to cyclizing the resulting compound of the formula [XIV] to give a compound of the formula [XV]. Further, (C) is directed to reacting a compound of the formula [XV] with a compound of the formula [VIII] or an acid halide thereof.

As explained in the above paragraph, independent claim 11 defines all essential steps including each of reaction, catalytic reduction, lower-alkyl esterification, isomerization, cyanation, and cyclization to produce intended compound of the formula [I]. Therefore, claim 11 in itself is definite.

Also, the reaction conditions, such as reagents, solvent, temperatures, and catalysts, used in these steps are predictable because one of ordinary skill in the art can easily and reasonably recognize these steps and their reaction conditions to give the compound of formula [1].

Further, these conditions are disclosed in detail in the present specification, for instance, at pages 20-30 and the Examples. Thus, one of ordinary skill in the art would be able to readily understand how those reactions and treatments defined above can be done based on common knowledge in this technical field. According to MPEP 2164.08, the claims need not recite such factors where one of ordinary skill in the art to whom the specification and claims are directed would consider them obvious. Furthermore, the present description clearly discloses the representative conditions and examples on how to do those reactions and treatments. Moreover, the manner of definitions in claim 11 has widely been accepted in the USPTO. Accordingly, what is sought to be protected of the present invention is definite.

Regarding the terms “converting” and “A’ group” of claim 11, Applicants have amended claim 11 to better clarify the present invention. Applicants respectfully assert that these amendments overcome the present rejection and request that the rejection be removed.

As discussed above, all of the rejections under 35 U.S.C. § 112, second paragraph, have been resolved, and thus, reconsideration and withdrawal of rejection are respectfully requested.

**CONCLUSION**

In summary, Applicants respectfully submit that the present claims define allowable subject matter. Therefore, the Examiner is respectfully requested to withdraw all rejections and allow the presently pending claims.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig A. McRobbie (Reg. No. 42,874) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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